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December 13, 2013

Docket Nos.: 50-425

NL-13-2489

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant  
Licensee Event Report 2-2013-002-00  
Automatic Unit 2 Reactor Trip Due To Loss Of Generator Excitation

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Southern Nuclear Operating Company (SNC) is submitting the enclosed Licensee Event Report, 2-2013-002.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "T. E. Tynan".

T. E. Tynan  
Vice President – Vogtle

TET/KCW

Enclosure: Unit 2 Licensee Event Report 2-2013-002-00

cc: Southern Nuclear Operating Company  
Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. T. E. Tynan, Vice President – Vogtle  
Mr. B. L. Ivey, Vice President – Regulatory Affairs  
Mr. B. J. Adams, Vice President – Fleet Operations  
Mr. D. L. Manigo, OE Coordinator - Vogtle  
RType: CVC7000

U. S. Nuclear Regulatory Commission  
Mr. V. M. McCree, Regional Administrator  
Mr. R. E. Martin, NRR Senior Project Manager - Vogtle  
Mr. L. M. Cain, Senior Resident Inspector – Vogtle

**Vogtle Electric Generating Plant – Unit 2  
Licensee Event Report 2-2013-002-00  
Automatic Unit 2 Reactor Trip Due To Loss Of Generator Excitation**

**Enclosure**

**Unit 2 Licensee Event Report 2-2013-002-00**

## LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME  
**Vogtle Electric Generating Plant**

2. DOCKET NUMBER  
**05000-425**

3. PAGE  
**1 OF 3**

4. TITLE  
**Automatic Unit 2 Reactor Trip due loss of Generator Excitation**

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	19	2013	2013	- 02 -	00	12	13	13	N/A	N/A
									N/A	N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)																																				
1	<table><tr><td><input type="checkbox"/> 20.2201(b)</td><td><input type="checkbox"/> 20.2203(a)(3)(i)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(C)</td><td><input type="checkbox"/> 50.73(a)(2)(vii)</td></tr><tr><td><input type="checkbox"/> 20.2201(d)</td><td><input type="checkbox"/> 20.2203(a)(3)(ii)</td><td><input type="checkbox"/> 50.73(a)(2)(ii)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(1)</td><td><input type="checkbox"/> 20.2203(a)(4)</td><td><input type="checkbox"/> 50.73(a)(2)(ii)(B)</td><td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(i)</td><td><input type="checkbox"/> 50.36(c)(1)(i)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(iii)</td><td><input type="checkbox"/> 50.73(a)(2)(ix)(A)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(ii)</td><td><input type="checkbox"/> 50.36(c)(1)(ii)(A)</td><td><input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(x)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(iii)</td><td><input type="checkbox"/> 50.36(c)(2)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(A)</td><td><input type="checkbox"/> 73.71(a)(4)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(iv)</td><td><input type="checkbox"/> 50.46(a)(3)(ii)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(B)</td><td><input type="checkbox"/> 73.71(a)(5)</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(v)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(A)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(C)</td><td><input type="checkbox"/> OTHER</td></tr><tr><td><input type="checkbox"/> 20.2203(a)(2)(vi)</td><td><input type="checkbox"/> 50.73(a)(2)(i)(B)</td><td><input type="checkbox"/> 50.73(a)(2)(v)(D)</td><td>Specify in Abstract below or in NRC Form 366A</td></tr></table>	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A
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10. POWER LEVEL																																					
100																																					

## 12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
Vogtle Electric Generating Plant / Kevin Walden	(706) 826-4290

## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	1328	P5C02	GE	No	N/A	N/A	N/A	N/A	N/A

## 14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

## 15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR
N/A	N/A	N/A

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 19, 2013 at approximately 0645 Eastern Daylight Time (EDT), Vogtle Unit 2 was operating in Mode 1 at 100% power. The main generator excitation system experienced a failure which tripped the Main Generator which subsequently tripped the Turbine and Reactor. The Reactor Trip System, the Engineered Safety Feature Actuation System, and other responding equipment performed as expected. The plant was stabilized in Mode 3. The cause of the event was a failure of the Main Generator excitation system.

The safety significance of this event is very low. Unit 1 was not affected and there were no adverse effects of the health and safety of the public.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Vogtle Electric Generating Plant	05000-425	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2      OF      3
		2013	-      02	-      00	

**NARRATIVE**

**A. REQUIREMENT FOR REPORT**

This report is required per 10 CFR 50.73(a)(2)(iv)(A) as there was an unplanned automatic actuation of the Reactor Protection System (RPS) and an automatic actuation of the Auxiliary Feedwater System (AFW).

**B. UNIT STATUS AT TIME OF EVENT**

Mode 1, 100% power

**C. DESCRIPTION OF EVENT**

While operating at 100% power with no abnormal indications, Unit 2 experienced a loss of generator excitation which tripped the Main Generator. This resulted in a Reactor Protection System (RPS) actuation due to a Turbine Trip above the P9 setpoint of 40% which shut down the reactor. The Auxiliary Feedwater System (AFW) actuated as Main Feedwater isolated when the RPS actuated. All rods inserted and the plant was stabilized in Mode 3 and no complications were experienced during the trip as all systems responded as designed.

**D. CAUSE OF EVENT**

The probable cause of the event was an intermittent fault in the Main Generator de-excitation control circuitry.

**E. SAFETY ASSESSMENT**

When the reactor tripped, all rods fully inserted. As a result of the reactor trip, the Feedwater System isolated and the Auxiliary Feedwater System actuated as designed. The unit was stabilized in Mode 3 at the applicable temperature and pressure. Because the plant responded as designed and there were no complications with the plant shutdown, there was no adverse effect on plant safety or the safety and health of the public.

**F. CORRECTIVE ACTION**

Following the failure of the de-excitation control circuitry of the EX2100 generator excitation system, three controller cards and a breaker were replaced within the de-excitation system at the recommendation General Electric.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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		2013	-      02	-      00	

**NARRATIVE**

**G. ADDITIONAL INFORMATION**

- 1) Failed Components:  
General Electric EX-2100 generator de-excitation control circuitry.
  
- 2) Previous Similar Events:  
ICES 235585 Bruce 6 Turbine Trips Due to Loss of Excitation
  
- 3) Energy Industry Identification System Code:  
  
[TL] – Main Generator Excitation System  
[JC] – Reactor Protection System  
[BA] – Auxiliary Feedwater System
  
- 4) Other Systems Affected:  
  
None
  
- 5) Commitment Information:  
  
This report does not create any commitments.